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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,259	05/31/2000	Marcos N. Novaes	POU9-2000-0003-USI	5275

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EXAMINER

WON, MICHAEL YOUNG

ART UNIT PAPER NUMBER

2155

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/584,259

Applicant(s)

NOVAES ET AL.

Examiner

Michael Y. Won

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 50-62 and 66-89 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 50-62 and 66-89 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/31/00 and 4/4/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the amendment filed July 28, 2005.
2. Claims 1-49 have been cancelled and new claims 50-97 have been added.
3. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 50-62 and 66-89 are drawn to Distributed Data Processing, classified in class 709, subclass 201.
 - II. Claims 63-65 and 90-92 are drawn to Error Detection/Correction of Networks, classified in class 714, subclass 4.
4. Because these inventions are distinct and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
5. During a telephone conversation with Blanche E. Schiller (Reg. No.: 35,670) on October 7, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 50-62 and claim 66-89. Applicant in replying to this Office action must make affirmation of this election. Claims 63-65 and 90-92 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 50-57, 66-73, and 78-85 are rejected under 35 U.S.C. 102(e) as being anticipated by Moiin et al. (US 5,999,712 A).

INDEPENDENT:

As per ***claims 50, 66, and 78***, Moiin teaches a method, a system, and an article of manufacture, respectively, of managing processing groups of a distributed computing environment, said method comprising:

requesting via a request by a prospective member to join a processing group (see col.6, lines 55-56 and col.7, lines 32-36) of the distributed computing environment, said request including a sequence number indicating a version of the processing group (see col.6, lines 39-41 and col.7, lines 27-32);

determining whether the prospective member can join the processing group, said determining employing the sequence number (see col.7, lines 27-36 & lines 64-67 and col.9, line 20-col.10, line 5); and

joining the processing group by the prospective member, in response at least in part to the determining indicating that the prospective member can join the processing group (see col.9, lines 14-19 and col.10, lines 6-9).

As per **claim 58**, Moiin teaches a method of managing processing groups of a distributed computing environment, said method comprising:

initiating by a prospective member of an active processing group an admission protocol to enable the prospective member to join the processing group (see col.7, lines 39-43), said admission protocol comprising:

requesting via a request by the prospective member to join the processing group (see col.7, lines 32-36), wherein the request to join includes a sequence number indicating a version of the processing group (see col.6, lines 39-41 and col.7, lines 27-32);

updating state associated with the processing group, in response to the request (see col.6, lines 31-38 & 51), said updating providing a current group sequence number (see col.7, lines 41-42);

comparing by said prospective member the sequence number in the request with the current group sequence number (see col.7, lines 27-36 & lines 64-67);

reinitializing state of the prospective member, in response to the comparing indicating a particular difference, to make the prospective member consistent with an existing member of the processing group (see col.6, lines 27-29 and col.8, lines 39-42);

updating the current group sequence number (see col.9, line 20-col.10, line 5); and

concluding the admission protocol, wherein the prospective member has joined the processing group (see col.9, lines 14-16).

DEPENDENT:

As per **claims 51, 67, and 79**, which depend on claim 50, 66, and 78, respectively, Moin teaches of further comprising updating state associated with the processing group, in response to the request (see col.6, lines 31-38 & 51), said updating providing a current group sequence number (see col.7, lines 41-42).

As per **claims 52, 68, and 80**, which depend on claim 51, 67, and 79, respectively, Moin teaches of further comprising quiescing activity that may affect the state prior to said updating (see col.6, lines 20-29: "can suspend... a set of registered processes" and col.13, lines 46-61).

As per **claims 53, 69, and 81**, which depend on claim 51, 67, and 79, respectively, Moin further teach wherein the determining comprises comparing by said

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prospective member the sequence number in the request with the current group sequence number to determine if the join should continue (see col.7, lines 27-36 & lines 64-67).

As per **claims 54, 70, and 82**, which depend on claim 53, 69, and 81, respectively, Moiin further teach wherein the joining comprises reinitializing state of the prospective member to make the prospective member consistent with an existing member of the processing group (see col.8, lines 41-42 and col.9, line 20-col.10, line 5).

As per **claims 55, 71, and 83**, which depend on claim 54, 70, and 82, respectively, Moiin further teach wherein the reinitializing is performed, in response to the comparing indicating that the sequence number in the request is less than the current group sequence number (see col.7, lines 27-32).

As per **claims 56, 72, and 84**, which depend on claim 54, 70, and 82, respectively, Moiin teach of further comprising determining an activity status of the processing group prior to the reinitializing, wherein the reinitializing is performed if the processing group is active (see col.6, lines 31-38: "cause reconfiguration on the receiving node").

As per **claims 57, 73, and 85**, which depend on claim 54, 70, and 82, respectively, Moiin further teach wherein the joining further comprises updating the current group sequence number (see col.7, lines 40-45 and col.9, line 20-col.10, line 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 59-62, 74-77, and 86-89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moin et al. (US 5,999,712 A) in view of Gamache et al. (US 6,401,120 B1).

INDEPENDENT:

As per ***claim 59, 74, and 86***, Moin teaches a method of managing processing groups of a distributed computing environment, said method comprising:

joining a prospective member to an inactive processing group (see col.7, line 46: "First Join");

comparing a sequence number of the processing group with a sequence number of the prospective member (see col.7, lines 27-36 & lines 64-67);

updating the sequence number of the processing group, in response to the comparing indicating a particular difference (see col.6, lines 27-29; col.8, lines 39-42; and col.9, line 20-col.10, line 5);

determining whether a quorum of members has joined the processing group (see col.8, line 65-col.9, line 13 and col.10, "/*If this is not the first join, we can check for quorum... */"); and

initiating activation of the processing group, in response to the setting (see col.5, lines 63-65; col.6, lines 39-42; col.7, lines 40-43; and col.8, lines 31-32)

Moiin does not explicitly teach of setting the sequence number of the processing group, in response to the determining indicating a quorum. Gamache teaches of setting the sequence number of the processing group, in response to the determining indicating a quorum (see col.2, lines 23-25).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Gamache within the system of Moiin by implementing setting the sequence number of the processing group in response to the determining indicating a quorum within the method of managing processing groups of a distributed computing environment because Moiin teaches of dynamically changing quorum (see col.5, lines 51-54 and col.6, lines 1-11), therefore since Moiin teaches that the sequence number is dependent on the various reconfigurations (see col.6, lines 40-41), changes in quorum would result in changes in the sequence number.

DEPENDENT:

As per **claims 60, 75, and 87**, which depend on claims 59, 74, and 86, respectively, Moiin further teaches wherein the initiating activation comprises:

obtaining by a member of the processing group having a sequence number lower than the sequence number of the processing group a copy of group state associated with the sequence number of the processing group (see col.7, lines 29-38); and

reinitializing the member using the copy of group state (see col.8, lines 41-42 and col.9, line 20-col.10, line 5).

As per **claims 61, 76, and 88**, which depend on claims 59, 74, and 86, respectively, Moiin further teaches wherein activation of the processing group comprises updating the sequence number of the processing group (see col.9, line 20-col.10, line 5).

As per **claims 62, 77, and 89**, which depend on claims 61, 76, and 88, respectively, Moiin further teaches wherein the updating of the sequence number of the processing group comprises updating the sequence number, in response to there being a majority of members in the processing group (implicit: see col.6, lines 40-41).

Response to Arguments

8. Applicant's arguments with respect to new claims have been considered but are moot in view of the new ground(s) of rejection. The examiner does not acquiesce the distinction between the claimed inventions interpretation of the "sequence number" and that of prior art reference *Shirvastava's* interpretation of a "sequence number", however, as a result of the change in scope with the new claims, have determined that *Moiin* better teaches the claimed invention.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

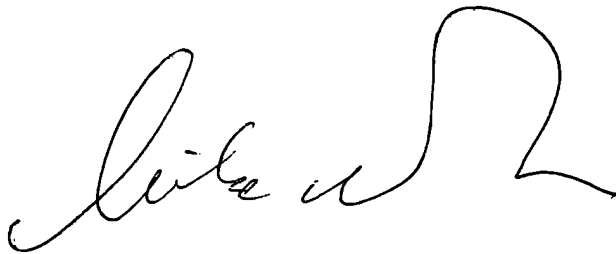
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Y. Won whose telephone number is 571-272-3993. The examiner can normally be reached on M-Th: 7AM-5PM.

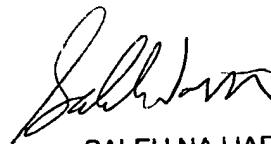
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Won

A large, stylized handwritten signature in black ink, appearing to read 'Michael Won'.

October 13, 2005

A smaller, stylized handwritten signature in black ink, appearing to read 'Saleh Najjar'.

SALEH NAJJAR
SUPERVISORY PATENT EXAMINER